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            612 ABCG5 OR ABCG8
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             348 DUP REM L1 (264 DUPLICATES REMOVED)
=> S L2 AND human
  13 FILES SEARCHED...
  21 FILES SEARCHED...
  39 FILES SEARCHED...
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L3

217 L2 AND HUMAN

SEQUENCE (SEQ):

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GenBank VERSION (VER):
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DIVISION CODE (CI):
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DATE (DATE):
                         13 Dec 2000
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                           ***human***
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NUCLEIC ACID COUNT (NA): 541 a
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                         Berge,K.E.; Tian,H.; Graf,G.A.; Yu,L.; Grishin,N.V.;
                         Schultz,J.; Kwiterovich,P.; Shan,B.; Barnes,R.;
                         Hobbs, H.H.
   TITLE (TI):
                        Accumulation of Dietary Cholesterol in Sitosterolemia
                        Caused by Mutations in Adjacent ABC Transporters
   JOURNAL (SO):
                         Science (2001) In press
REFERENCE:
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   AUTHOR (AU):
                        Hobbs, H.H.
   TITLE (TI):
                        Direct Submission
                        Submitted (09-NOV-2000) Molecular Genetics, University
   JOURNAL (SO):
                        of Texas, Southwestern Medical Center at Dallas, 5323
                        Harry Hines Blvd., Dallas, TX 75390-9046, USA
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          ANSWER 201 OF 217 IFIPAT COPYRIGHT 2003 IFI on STN
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AN
                ***ABCG5***
                                                        ***ABCG8***
                                          AND
                                                                                   : COMPOSITIONS AND METHODS OF USE
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IN
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DT
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FS
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CLMN
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GT
              3 Figure(s).
          FIG. 1. Genomic structure (A), putative topology (B), and predicted amino acid sequences of ***ABCG5*** and ***ABCG8*** (C). ***ABCG5*** and ***ABCG8*** are located on chromosome 2p21 between markers D2S177 and D2S 119. (A) ***ABCG5*** and ***ABCG8*** are tandemly arrayed
            in a headto-head orientation separated by 374 basepairs.
                        ***ABCG8*** are both encoded by 13 exons and each spans *28 kb.
           (B) The mutations detected in patients with sitosterolemia (Table 2) are indicated on a schematic model of ***ABCG5*** (left) and ***ABCG8*** (right) (C) Predicted amino acid sequence of ***ABCG5** and ***ABCG8***, which are 651 and 673 residues in length, respectively. Alignment of the inferred amino acid sequences indicates 28% sequence identity and 61% sequence similarity between ***ABCG5***
                                                                                                                                              ***ABCG5***
            and ***ABCG8*** . Both proteins are predicted to contain six transmembrane segments using the program MEMSAT 2 (Jones, et al.
           Biochem. 33:3038 (1994)). The putative transmembrane segments of each protein are indicated by blue ( ***ABCG5*** ) or green ( ***ABCG8*** ) cylinders (B) and lines (C). The Walker A motif and Walker B motifs are highlighted in yellow and pink, respectively. The ABC signature sequence
          (C-motif) is indicated in purple. FIG. 2. Expression of ***ABCG5***
                                                                                                     ***ABCG8***
                                                                                        and
                                                                                                                                            ***human***
            tissues (A) and the effect of cholesterol feeding on levels of
```

ABCG8 mRNAs in mouse liver and intestines

ABCG5 and

```
(B) (A) Northern blot analysis of ***human*** tissues. The coding sequence of ***ABCG5*** and ***ABCG8*** were amplify from liver polyA+RNA (Clontech) and the fragments were cloned into the prasmid
 vector pGEM-T (Promega). The coding region of the cDNA was amplified and
 the fragment radiolabeled (Megaprime DNA Labeling System, Amersham) prior
 to incubation with the blot in Rapid-hyb buffer (1 x 106 cpm/ml)
 (Amersham). The blot was washed and subjected to autoradiography for 18 husing Kodak X-OMAT-blue film (Jokinen, et al., J. Biol. Chem. 269:26411
 (1994)). The results were identical when probes generated from the 3 untranslated regions of both cDNAs were used. (B) Cholesterol
 teedinginduces coordinate increases in levels of
                                                                        ***ABCG5***
                       mRNA. Seven-week-old male mice (12983/SvImj) were fed
 powdered chow (Harlan Teklad Rodent Diet) in the absence or presence of
 cholesterol (2%, w/v). Mice were killed after one or seven days in the
 light phase of the cycle. Total RNA was isolated using RNA-STAT (TelTest)
 from the liver and three equal segments of the small intestine (duodenum,
 jejunum and ileum). The tissue RNAs were pooled from three animals and aliquots (15 mu g) used to make duplicate northern blots (Hobbs, et al, Hum. Mutat. 1:445 (1992)). The mouse cDNAs for ***ABCG5*** and ***ABCG8*** were used as probes. Cyclophilin was used as an internal standard. The results were identical when probes generated from the 3'
 untranslated regions of both cDNAs were used.
IG. 3. (A) ***ABCG8*** exon 2 (reverse strand) through
FIG. 3. (A)
                                                                                      ***ABCG5***
 exon 2 (forward strand). The four exons are underlined and the conserved
 regions are in uppercase. The sequence ends in intron 2 of ***ABCG5*** and is in the following order: ***ABCG8*** -exon 2 (reverse strand); ***ABCG8*** -intron 1 (reverse strand); ***ABCG8*** -exon 1 (forward strand); sap between genes; ***ABCG5*** -exon 1 (forward strand); ***ABCG5*** -intron 1 (forward strand); ***ABCG5*** -exon 2 (forward strand); and ***ABCG5*** -intron 2 (forward strand, partial). (B) The sequence between ***ABCG5*** and ***ABCG8*** in which the control sequences (a.g. bidirectional promoter etc.) reside
 sequences (e.g., bidirectional promoter, etc.) reside.
ANSWER 202 OF 217 IFIPAT COPYRIGHT 2003 IFI on STN
 10138062 IFIPAT; IFIUDB; IFICDB
 SITOSTEROLEMIA SUSCEPTIBILITY GENE (SSG): COMPOSITIONS AND METHODS OF
 USE; NUCLEOTIDE SEQUENCES CODING POLYPEPTIDE FOR USE IN THE TREATMENT OF
 HYPERCHOLESTEROLEMIA, HYPERLIPIDEMIA, GALL STONES, AND ATHEROSCLEROSIS
 Schultz Joshua; Shan Bei; Tian Hui
 Unassigned Or Assigned To Individual (68000) US 2002081687 A1 20020627
 US 2001-837992
                             20010418
 US 2000~198465P
                             20000418 (Provisional)
 US 2000-204234P
                             20000515 (Provisional)
 US 2002081687
                             20020627
 Utility; Patent Application - First Publication
 CHEMICAL
 APPLICATION
 74
  14 Figure(s).
FIG. 1 shows a Northern blot that demonstrates that the LXR agonist
 Compound (Cpd.) A causes an increase in the level of SSG mRNĂ in the
 liver and the intestine.
FIG. 2 shows a Northern blot demonstrating that the LXR agonists Compounds
B and C produce an increase in the level of ABC1 and ABC8 mRNA.
FIG. 3 shows a Northern blot demonstrating that the LXR agonist Compound A
 causes an increase in the level of expression of ABC1 in the liver,
 intestine, and kidney.
FIG. 4 demonstrates that the LXR agonist Compound A stimulates efflux of
 cholesterol from Caco-2 cells.
FIG. 5 provides a model for the role of SSG, and the regulation of SSG by
 LXR-RXR, in cells lining the intestinal lumen. According to this model,
 SSG plays a role in sterol efflux from the cells lining the intestinal
 lumen, i.e. SSG plays a role in counteracting the absorption of sterol
 from the intestine, thus explaining the elevated sterol levels in sitosterolemia patients who lack SSG function.
FIG. 6 provides the structures of the LXR agonists Compounds A, B, and C.
FIG. 7 shows the amino acid and nucleotide sequence for mouse SSG.
FIG. 8 shows the amino acid and nucleotide sequence for
FIG. 9 shows a comparison between the mouse and
                                                                     ***human***
                                                                                        SSG amino
 acid sequences.
FIG. 10 shows the results of a mapping experiment for SSG using the
                ***human***
                                   TNG Radiation Hybrid Panel (Research Genetics),
 confirming the map position of
                                              ***human***
                                                                  SSG of between markers
```

L3

AN TI

IN

PA PI

ΑI

FI

DT

FS

GI

CLMN

D2S177 and D2S119.

PRAI

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FIG. 11 shows the results of PCR using SSG specific primers and cDNA
 panels from various tissues
                       ***human **
                                      SSG (or
                                                 ***human***
                                                                     *ABCG5***
FIG. 12 shows that
 ) is predominantly expressed in the liver and small intestine.
FIG. 13 shows that mouse SSG (or mouse *** expressed in the liver and small intestine.
                                            ***ABCG5***
                                                          ) is predominantly
FIG. 14 illustrates the cDNA cloning and genomic organization of SSG (or ***ABCG5*** ) (A). The predicted ***human*** and mouse proteins
 share 80% identity and are 28% identical to Drosophilia Brown.
   ***Human*** SSG contains 13 exons and spans at least 25 kb of genomic
 DNA (B).
ANSWER 203 OF 217
                        MEDLINE on STN
2003068590
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22466656
            PubMed ID: 12578886
Image in cardiovascular medicine. Aortic xanthomatosis with coronary
ostial occlusion in a child homozygous for a nonsense mutation in
  ***ABCG8***
Mymin David; Wang Jian; Frohlich Jiri; Hegele Robert A
Robarts Research Institute, London, Ontario, Canada. CIRCULATION, (2003 Feb 11) 107 (5) 791.
Journal code: 0147763. ISSN: 1524-4539.
United States
Journal; Article; (JOURNAL ARTICLE)
English
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ANSWER 204 OF 217
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Genetic disorders associated with ATP binding cassette cholesterol
Burris Thomas P; Eacho Patrick I; Cao Guoqing
Lilly Research Laboratories, Eli Lilly & Company, Lilly Corporate Center.
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MOLECULAR GENETICS AND METABOLISM, (2002 Sep-Oct) 77 (1-2) 13-20. Ref: 54 Journal code: 9805456. ISSN: 1096-7192.
United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
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Priority Journals
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Last Updated on STN: 20030528
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ANSWER 205 OF 217
                        MEDLINE on STN
2002453875
                MEDLINE
22198748
            PubMed ID: 12208859
Biliary cholesterol secretion by the twinned sterol half-transporters
  ***ABCG5***
                        ***ABCG8***
                 and
Comment on: J Clin Invest. 2002 Sep;110(5):659-69
Comment on: J Clin Invest. 2002 Sep;110(5):671-80
Wittenburg Henning; Carey Martin C
Department of Medicine, Harvard Medical School, Gastroenterology Division.
Brigham and Women's Hospital, and Harvard Digestive Diseases Center,
Boston, Massachusetts 02115, USA.
JOURNAL OF CLINICAL INVESTIGATION, (2002 Sep) 110 (5) 605-9. Ref: 25
Journal code: 7802877. ISSN: 0021-9738.
United States
Commentary
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
English
Abridged Index Medicus Journals; Priority Journals
200210
Entered STN: 20020906
Last Updated on STN: 20021012
Entered Medline: 20021011
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                              MEDLIN STN
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     22119727
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                           ***human***
     Mutations in the
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        ***ABCG5***
                              ***ABCG8***
                       and
                                              in sitosterolemia.
     Heimer Susanne; Langmann Thomas; Moehle Christoph; Mauerer Richard; Dean
ΑU
     Michael; Beil Frank-Ulrich; von Bergmann Klaus; Schmitz Gerd
     Institute for Clinical Chemistry and Laboratory Medicine, University of
CS
     Regensburg, Germany
     HUMAN MUTATION, (2002 Aug) 20 (2) 151.
Journal code: 9215429. ISSN: 1098-1004.
SO
CY
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     Journal; Article; (JOURNAL ARTICLE)
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AN
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     21589911
                  PubMed ID: 11732455
     Plant sterol/sterolin supplement use in a cohort of South African
TI
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     Bouic P J; Clark A; Brittle W; Lamprecht J H; Freestone M; Liebenberg R W SOUTH AFRICAN MEDICAL JOURNAL, (2001 Oct) 91 (10) 848-50. Journal code: 0404520. ISSN: 0038-2469.
S<sub>0</sub>
CY
     South Africa
DT
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     Priority Journals
     200201
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     Entered Medline: 20020102
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     ANSWER 208 OF 217
                              MEDLINE on STN
     2001642506
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AN
     21534515 PubMed ID: 11677224 Diet and disease: the "phyte" over intestinal cholesterol.
DN
TI
     Carter B A; Karpen S J
ΑU
     GASTROENTEROLOGY, (2001 Nov) 121 (5) 1255-6.
SO
     Journal code: 0374630. ISSN: 0016-5085.
CY
     United States
DT
     Journal; Article; (JOURNAL ARTICLE)
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     2001459289
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     21396679
                  PubMed ID: 11504671
TI
     Dietary cholesterol absorption; more than just bile.
ΑU
     Lu K; Lee M H; Patel S B
     Division of Endocrinology, Diabetes and Medical Genetics, Medical University of South Carolina, STR 541, 114 Doughty Street, Charleston, SC
CS
     29403, USA.
NC
     HL60613 (NHLBI)
     TRENDS IN ENDOCRINOLOGY AND METABOLISM, (2001 Sep) 12 (7) 314-20. Ref: 64
SO
     Journal code: 9001516. ISSN: 1043-2760.
CY
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DT
     Journal; Article; (JOURNAL ARTICLE)
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     ANSWER 210 OF 217
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     2001064454
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     20559920
                 PubMed ID: 11186392
TI
     Biochemistry. An absorbing study of cholesterol.
     Comment on: Science. 2000 Dec 1;290(5497):1771-5
CM
     Allayee H; Laffitte B A; Lusis Á J

Department of Medicine, University of California, Los Angeles (UCLA)
ΑU
CS
     School of Medicine, Los Angeles, CA 90095, USA.. hallayee@ucla.edu
SCIENCE, (2000 Dec 1) 290 (5497) 1709-11.
SO
     Journal code: 0404511. ISSN: 0036-8075.
CY
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DT
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     Last Updated on STN: 20021227
     Entered Medline: 20001222
L3
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AN
       2003-0179950
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       Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.
TIEN
      Aortic xanthomatosis with coronary ostial occlusion in a child homozygous
                                      ***ABCG8***
       for a nonsense mutation in
      MYMIN David; JIAN WANG; FROHLICH Jiri; HEGELE Robert A.
      Robarts Research Institute, London, Ontario, Canada; Healthy Heart
Program, St Paul's Hospital, University of British Columbia, Vancouver,
CS
       British Columbia, Canada
SO
      Circulation : (New York, N.Y.), (2003), 107(5), p. 791
       ISSN: 0009-7322 CODEN: CIRCAZ
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CY
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       INIST-5907, 354000104154880270
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     ANSWER 212 OF 217 PROMT COPYRIGHT 2003 Gale Group on STN
ACCESSION NUMBER:
                      2001:4829 PROMT
TITLE:
                      Sitosterolemia Genes Discovered.
SOURCE:
                      Applied Genetics News, (Dec 2000) Vol. 21, No. 5.
                      ISSN: 0271-7107.
PUBLISHER:
                      Business Communications Company, Inc.
DOCUMENT TYPE:
                      Newsletter
LANGUAGE:
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WORD COUNT:
                      231
                      *FULL TEXT IS AVAILABLE IN THE ALL FORMAT*
L3
     ANSWER 213 OF 217 PROMT COPYRIGHT 2003 Gale Group on STN
                      2000:1046858 PROMT
ACCESSION NUMBER:
TITLE:
                      Tularik Discovers Genes Involved in Cholesterol Regulation.
SOURCE:
                      PR Newswire, (1 Dec 2000) pp. 8802.
PUBLISHER:
                      PR Newswire Association, Inc.
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                      *FULL TEXT IS AVAILABLE IN THE ALL FORMAT*
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ACCESSION NUMBER:
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TITLE:
                      RARE LIPID DISORDER HINTS AT CHOLESTEROL-CUTTING AGENTS
                      TULARIK, TEXAS U. TEAM UP TO FERRET OUT GENES THAT HUSTLE
                      TOXIC PLANT STEROLS OUT OF BODY.
AUTHOR(S):
                      Leff, David N.
SOURCE:
                      BIOWORLD Today, (1 Dec 2000) No. 231.
PUBLISHER:
                     American Health Consultants, Inc.
DOCUMENT TYPE:
                     Newsletter
LANGUAGE:
                     English
WORD COUNT:
                      1039
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FULL TEXT IS AVAILABLE IN THE ALL FORMAT

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     ANSWER 215 OF 217 SCISEARCH_COPYRIGHT 2003 THOMSON ISI ON SI
     2003:424112 SCISEARCH
AN
     The Genuine Article (R) Number: 676GG
GA
                                           ***ABCG5***
TI
     Overexpression of
                          ***human***
                                                          and
                                                                ***ABCG8***
     transgenic mice: Effects on intestinal cholesterol absorption, biliary
     sterol excretion and atherosclerosis
     Wu J E (Reprint); Basso F; Shamburek R D; Amar M J; Vaisman B; Tansey T; Lita F; Paigen B; Fruchart-Najib J; Brewer H B; Santamarina-Fojo S
ΑU
CS
     NHLBI, Bethesda, MD 20892 USA; Jackson Labs, Bar Harbor, ME USA; Inst
     Pasteur, F-59019 Lille, France
CYA
     USA: France
     ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY, (MAY 2003) Vol. 23. No.
SO.
     5, pp. A42-A43. MA P241.
     Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA
     19106-3621 USA.
     ISSN: 1079-5642.
DT
     Conference; Journal
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     English
REC
     Reference Count: 0
L3
     ANSWER 216 OF 217 USPATFULL on STN
       2003:37614 USPATFULL
ΑN
       Novel ABCG4 transporter and uses thereof
TI
TN
       Chen, Hongyun, Vancouver, CANADA
       Le Bihan, Stephane, Vancouver, CANADA
       Active Pass Pharmaceuticals, Inc., Vancouver, CANADA (non-U.S.
PA
       corporation)
       US 2003027259
PΙ
                           Α1
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ΑI
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                                20020301 (10)
                           Α1
                            20010302 (60)
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                            20010731 (60)
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       NCLS: 435/320.100; 435/325.000; 435/006.000; 530/350.000; 536/023.500
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L3
     ANSWER 217 OF 217 USPATFULL on STN
       2002:337461 USPATFULL
ΑN
ΤI
       Increased functional activity and/or expression of ABC transporters
       protects against the loss of dopamine neurons associated with
       Parkinson's disease
IN
       Reiner, Peter B., Vancouver, CANADA
       Roy, Josee, Vancouver, CANADA
       Connop, Bruce P., Vancouver, CANADA
       Active Pass Pharmaceuticals, Inc., Vancouver, CANADA (non-U.S.
PA
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PT
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       ICS: C12N015-85
CAS INDEXING IS AVAILABLE FOR THIS PATENT,
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